

Takuji HOSHINO* & Kaori OKAMOTO*: **Geographycal distribution of two cytotypes of *Carex conica* in Seto Inland Sea area of Japan**

星野卓二*・岡本 香*: ヒメカンスゲの2サイトタイプと
その瀬戸内地域における分布

Carex conica Boott occurs at road-sides and the mantle of forests in almost all regions of Japan. Akiyama (1955) reported that this species varied in external morphology differentiating into several variants in respective natural habitats. Okamoto (1965) found two ecological types, that is, road-side type and forest mantle type. Tanaka, N. (1948) reported aneuploid chromosome numbers, $2n=34$, 35 and 38, in this species.

In our studies new chromosome numbers, $2n=32$ and $2n=36$, were found in the species collected in the islands of Seto Inland Sea and its surrounding areas (Fig. 1-A, B). The localities, number of stocks and chromosome number of materials used here are shown in Table 1. Somatic and meiotic chromosome numbers were determined in squash preparations made by the method of Tanaka, R. and Hoshino, T. (1975).

A cytotype with $2n=32$ was found among 65 stocks collected from 19 localities in the islands of Seto Inland Sea and the coastal areas in the Chugoku Region (Table 1). These localities are shown in Fig. 2. In mountainous areas only one stock at Oasa, Hiroshima Prefecture, had a chromosome number of $2n=32$. All the stocks observed in these areas were found at road-side. Meiotic division was observed in over 20 stocks with $2n=32$ from 7 populations. In all PMCs 16 bivalent chromosomes were observed (Fig. 1-C), and there were no irregular division in anaphases I and II.

The $2n=36$ cytotype was found in 63 stocks collected from 11 localities in mountainous areas in the Chugoku and Shikoku Regions (Table 1). All of these stocks occur in rocky places in the mantle and floor of forests. Meiosis was observed in over 25 stocks of $2n=36$ collected from 6 localities. In all of the PMCs observed only the association, 18 bivalents, were found

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Tab. 1. Localities, chromosome number and number of stocks of *Carex conica*.

Localities	Chromosome number		No. of stocks studied
	2n	n	
Ridai-T., Okayama Pref. Chugoku Region	32	16	4
Mt. Kinko, " "	32	—	2
Gokei, " "	32	—	2
Takahashi-C., " "	36	—	2
Iwayakei, " "	36	18	5
Yamanokyo, Hiroshima Pref. "	36	—	3
Ashida-T., " "	32	16	6
Taishakukyo, " "	36	18	4
Takano-T., " "	36	—	3
Kosan-T., " "	32	—	2
Mitsuki-T., " "	32	—	3
Inno Isl., " "	32	16	5
Kouchi-T., " "	32	—	2
Tadanoumi-T., " "	32	16	3
Okuno Isl., " "	32	—	2
Higashi Hiroshima-C., " "	32	—	1
Shiraki-T., " "	32	—	2
Oasa-T., " "	32	—	1
Geihoku-T., " "	36	18	2
Sandankyo, " "	36	—	3
Kawato, Kabe-T., " "	36	—	4
Tanoshiri, Kabe-T., " "	36	—	2
Kabe-T., " "	36	—	4
Ugakyo, " "	36	18	2
Sato-T., " "	32	16	9
Nikokyo, " "	32	—	2
Tenno, Kure-C., " "	32	—	1
Saka-T., " "	32	16	6
Kurahashi Isl., " "	32	—	3
Higashi Nomi Isl., " "	32	—	5
Omi Isl., Ehime Pref. Shikoku Region	32	16	3
Niihama-C., " "	36	—	6
Misakatoge, " "	36	18	5
Mikawa-V., " "	36	—	2
Otoyo-T., Kouchi Pref. "	36	18	10
Ninjo-V., " "	36	—	4
Yasuhara-T., " "	36	—	3

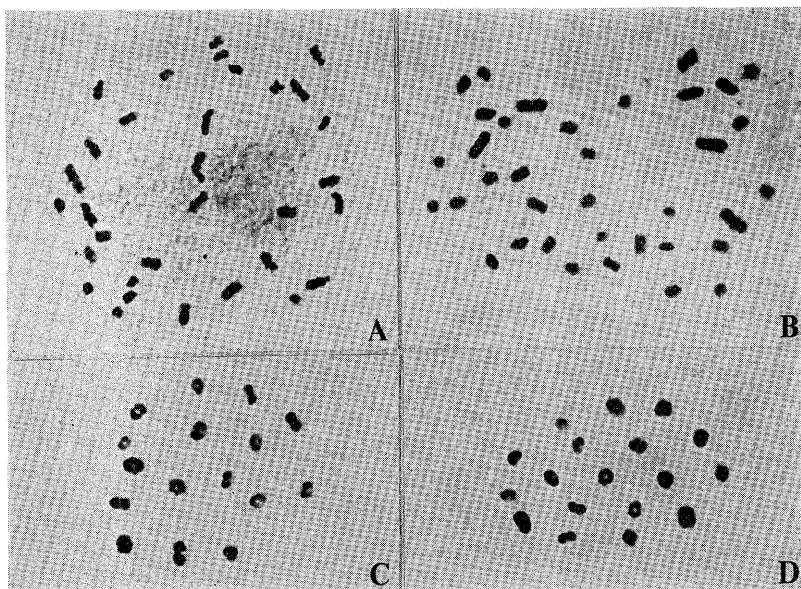


Fig. 1. Metaphase chromosomes in root tip cells of *Carex conica* A) $2n=32$. B) $2n=36$ and metaphase I chromosomes of PMCs. C) $n=16$. D) $n=18$. $\times 3000$.

at metaphase I and there was no irregular division at anaphases I and II (Fig. 1-D).

Tanaka, N. (1948) reported aneuploid chromosome numbers of $2n=34$, 35 and 38, in this species, although there was no report on the geographical distribution of these aneuploids. In the present study two cytotypes with $2n=32$ and $2n=36$ were found distributed widely in the islands of Seto Inland Sea and its surrounding areas. The two cytotypes showed different geographical distribution, that is, the $2n=32$ cytotype was found in the islands of Seto Inland Sea and the coastal areas of the Chugoku Regions, and the $2n=36$ cytotype was found in the Shikoku Region and in mountainous areas of the Chugoku Region. They also showed difference in growing conditions; the cytotype with $2n=32$ was found in grassy road-sides, while the cytotype with $2n=36$ was found in the mantle of forests and rocky places of the forest floor. The two types, road-side type and forest type, reported by Okamoto (1965) were found to correspond with the cytotypes, $2n=32$ and $2n=36$, respectively. The two cytotypes showed regular meiotic

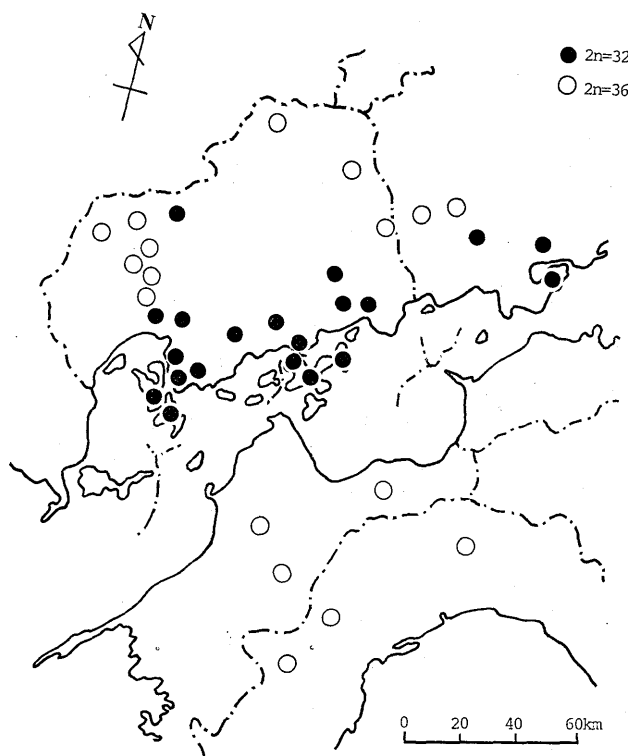


Fig. 2. Variation of chromosome number of *Carex conica* in the islands of Inland Sea and the surrounding areas.

division indicating that they are genetically stable.

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ヒメカンスゲについて、瀬戸内及びその沿岸地域37場所128個体の染色体数を観察した。この結果、瀬戸内及びその沿岸地域には $2n=32$ と $2n=36$ の2型があることがわかった。 $2n=32$ の株は瀬戸内諸島及び中国地方の沿岸地域の路傍草地に、 $2n=36$ の株は中国地方と四国地方の山地の林縁及び林床の岩礫地に分布している。減数分裂では $2n=32$ の株は 16II, $2n=36$ の株は 18II が観察され、2型は共に遺伝的に安定したサイトタイプであることがわかった。

○ハナブササウと花房義質翁 (小林義雄) Yosio KOBAYASI: *Hanabusaya asiatica* and Yoshikata Hanabusa

ここに述べる事柄は多くの偶然性の連鎖である。ことの起りは次の次第である。1978年は中井猛之進博士の27回忌に当るので、臘月6日に弟子等が集ってささやかな追憶の宴を開いた。私はこの席で思ひ出のよすがにと一小話を披露した。それは中井博士によって発表されたハナブササウのことである。これに関する記事は予ねて奥山春季氏を中心にして多年に亘って続けられた植物採集ニュースが1978年秋の第100号を以て終結するということで、私はこれを記念する意味を含めて、その99号に載せて貰ったものである。ハナブササウはキキョウ科の単一型属のものであり、小石川植物園の内山富次郎氏が1902年に韓国の金剛山で採ったものをタイプとして1911年に中井博士が新属新種として発表したのである。次いで1918年に金剛山植物調査書を出版の折に寺内万次郎画伯の筆になる色彩画をこれに載せた。この属名は京城(ソウル)に於ける我国公使花房義質(1917年逝去)氏に捧げたものである。但し中井、花房両氏の間に直接交渉があったか否かは知る由もない。花房氏は明治15年の韓国内乱(壬午の変)に際会した日本の代表で、危難の中にあつて日本人としての気骨を発揮し、清国と韓国との間に於いて沈着に外交官としての駆引に成功した人物である。また日本の外交政策の一つとして設けられた貴族会館(鹿鳴館)でも活躍し、鹿鳴館時代(1883-'87)の担い手の一人でもあった。その間1883-'85年には北欧各国への日本公使として勤務している。

ここで話は降って第2次大戦終了の年(1945)に移る。東京は度々の空襲を受け、多くの市民は家財を残して疎開の最中であった。私は満州へ帰任のための乗物の順番を待つ毎日であったが、或日銀座通りを歩いていた。ふと見ると古道具店の店先に山のようにならべられていた品々の間に、予ねてから欲しいと思っていた雑誌山岳が1巻から完全に揃って積まれていた。その上に新聞紙包みがあり、高山植物らしいおし葉がはみ出て